What is claimed is:

Sub A1

1. In the fabrication of a device, a method of patterning a device layer comprising:

providing a substrate comprising the device layer on its surface; and

patterning the device layer by pressing a stamp comprising a pattern against the substrate.

2. The method of claim 1 wherein the device comprises an organic LED device.

3. The method of claim 2 wherein the substrate comprises a polymeric substrate.

4. The method of claim 3 wherein the substrate comprises a flexible or ductile substrate.

5. The method of claim 4 wherein the substrate comprises a transparent substrate.

6. The method of claim 5 wherein the device layer comprises a transparent conductive layer.

7. The method of claim 6 wherein the transparent conductive layer comprises a conductive oxide.

8. The method of claim wherein 7 conductive oxide comprises indium-tin-oxide.

9. The method of claim 8 wherein the pattern is produced by protrusions on a surface of the stamp.

10. The method of claim 9 wherein patterning the device layer forms lower electrodes on the substrate.

11. The method of claim 10 wherein the protrusions comprise a height greater than a thickness of the device layer.

12. The method of claim 11 wherein the height of the protrusions is at least about 2 - 10 times greater than the thickness of the device layer.

13. The method of claim 12 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

14. The method of claim 13 wherein the load comprises a net pressure of greater than about 1.10 times a yield strength of the substrate.

15. The method of claim 14 further comprises processing to form OLED pixels.

16. The method of claim 15 wherein the processing to form OLED pixels comprises:

forming at least one organic functional layer on lower electrodes; and

forming upper electrodes on the organic functional layer, wherein OLED pixels are formed where upper and lower electrodes sandwich the organic functional layer.

17. The method of claim 3 wherein the substrate comprises a transparent substrate.

18. The method of claim 17 wherein the device layer comprises a transparent conductive layer.

19. The method of claim 18 wherein the pattern is produced by protrusions on a surface of the stamp.

20. The method of claim 19 wherein patterning the device layer forms lower electrodes on the substrate.

21. The method of claim 20 wherein the protrusions comprise a height greater than a thickness of the device layer.

22. The method of claim 21 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

23. The method of claim 22 further comprises processing to form OLED pixels.

24. The method of claim 23 wherein the processing to form OLED pixels comprises:

forming at least one organic functional layer on lower electrodes; and

forming upper electrodes on the organic functional layer, wherein OLED pixels are formed where upper and lower electrodes sandwich the organic functional layer.

25. The method of claim 3 wherein the device layer comprises a conductive layer.

26. The method of claim 25 wherein the pattern is produced by protrusions on a surface of the stamp.

27. The method of claim 26 wherein patterning the device layer forms lower electrodes on the substrate.

28. The method of claim 27 wherein the protrusions comprise a height greater than a thickness of the device layer.

29. The method of claim 28 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

30. The method of claim 29 further comprises processing to form OLED pixels.

31. The method of claim 30 wherein the processing to form OLED pixels comprises:

forming at least one organic functional layer on lower electrodes; and

forming upper electrodes on the organic functional layer, wherein OLED pixels are formed where upper and lower electrodes sandwich the organic functional layer.

32. The method of claim 2 wherein the substrate comprises a material selected from the group consisting of polyester, poly(ethylene terephthalate), poly(butylene terephthalate), poly(enthylene naphthalate), polyethylenesterephtalate, polycarbonate, polyimides, polysulfones, poly(p-phenylene ether sulfone), polyethylene, polypropylene, poly(vinyl chloride), polystyrene, and poly(methyl methyleacrylate).

33. The method of claim 32 wherein the device layer comprises a conductive layer.

34. The method of claim 33 wherein the pattern is produced by protrusions on a surface of the stamp, the pattern is used to form lower electrodes on the substrate.

35. The method of claim 34 wherein the protrusions comprise a height greater than a thickness of the device layer to pattern the device layer.

36. The method of claim 35 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

37. The method of claim 36 further comprises processing to form OLED pixels comprising:

forming at least one organic functional layer on lower electrodes; and

forming upper electrodes on the organic functional layer, wherein OLED pixels are formed where upper and lower electrodes sandwich the organic functional layer.

38. The method of claim 1 wherein the substrate comprises a polymeric substrate.

39. The method of claim 38 wherein the pattern is produced by protrusions on a surface of the stamp.

40. The method of claim 39 wherein the protrusions comprise a height greater than a thickness of the device layer.

41. The method of claim 40 wherein the height of the protrusions is at least about 5-10 times greater than the thickness of the device layer.

42. The method of claim 41 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

43. The method of claim 42 wherein the load comprises a net pressure of greater than about 1.1 times a yield strength of the substrate.

44. The method of claim 43 further comprises processing to form the device.

45. The method of claim 44 wherein the device comprises a device selected from the group consisting of an electrical device, a mechanical device, a

electromechanical device, and a microelectromechanical system.

46. The method of claim 40 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

47. The method of claim 46 further comprises processing to form the device.

48. The method of claim 47 wherein the device comprises a device selected from the group consisting of an electrical device, a mechanical device, a electromechanical device, and a microelectromechanical system.

49. The method of claim 1 wherein the substrate comprises a material selected from the group consisting of polyester, poly(ethylene terephthalate), poly(butylene terephthalate), poly(enthylene naphthalate), polyethylenesterephtalate, polycarbonate, polyimides, polysulfones, poly(*p*-phenylene ether sulfone), polyethylene, polypropylene, poly(vinyl

chloride), polystyrene, and poly(methyl methyleacrylate).

50. The method of claim 49 wherein the pattern is produced by protrusions on a surface of the stamp.

51. The method of claim 50 wherein the protrusions comprise a height greater than a thickness of the device layer to pattern the device layer.

52. The method of claim 51 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

53. The method of claim 52 further comprises processing to form the device.

54. A method of patterning comprising:

rotating a stamp comprising a drum with a pattern; and

translating a substrate with a device layer thereon as the stamp is rotated to pattern the device.

55. The method of claim 1 wherein the substrate comprises a polymeric substrate.

56. The method of claim 55 wherein the pattern is produced by protrusions on a surface of the stamp.

57. The method of claim 56 wherein the protrusions comprise a height greater than a thickness of the device layer to pattern the device layer.

58. The method of claim 57 wherein the stamp is pressed against the substrate surface under a load without causing the device layer to crack in non-patterned areas.

59. The method of claim 58 further comprises processing to form the device.

60. The method of claim 59 wherein the device comprises a device selected from the group consisting of an electrical device, a mechanical device, a electromechanical device, and a microelectromechanical system.

61. The method of claim 59 wherein the device comprises an OLED device.